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ABSTRACT

Issues related to student attrition in the three Nebraska postsecondary systems are described and an assessment of their implications is offered. Other purposes of the report are to: review statewide goals that could be adopted to reduce student attrition; present a research design that describes how an in-depth attrition study should be conducted; and propose a time table and cost estimate for completing a study of student attrition. The three public postsecondary educational systems considered are the University of Nebraska, the Nebraska State Colleges, and the Nebraska Technical/Community Colleges. The proposed attrition study has the potential for a broader scope that could include both public and independent sectors of postsecondary education. (SW)

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NEBRASKA COORDINATING COMMISSION FOR POSTSECONDARY EDUCATION

Attrition in the State of Nebraska

Recommendations for a Statewide Study of

Student Attrition among

Nebraska Postsecondary Education Institutions:

Issues, Goals, Research Design, Timetable and Cost Estimate

January 1, 1978

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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NEBRASKA COORDINATING COMMISSION FOR POSTSECONDARY EDUCATION

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December 30, 1977

Senator Frank Lewis
Senator Jerome Warner
Nebraska Postsecondary Education
Advisory Committee
State Capitol
Lincoln, Nebraska 68509

Dear Senator Lewis and Senator Warner:

The Nebraska Coordinating Commission for Postsecondary Education hereby transmits for consideration by the Nebraska Postsecondary Education Advisory Committee "Recommendations for a Statewide Study of Student Attrition." The Commission was originally charged in L.B. 459 to "Determine the extent of student attrition in the three postsecondary systems and recommend approaches for the reduction of attrition rates." This was later revised to be a report which would provide: "(1) A description of issues related to student attrition and an assessment of their implications; (2) A review of the statewide goals that could be adopted to reduce student attrition; (3) A research design that describes how an in-depth attrition study should be conducted; and (4) A timetable and cost estimate for completing a comprehensive study of student attrition." The Commission approved this report for transmittal on December 16, 1977.

The Commission is grateful to the advisory committee members, consultants and staff who diligently worked toward the completion of this report.

Sincerely yours,

Sam Jensen, Chairman

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Mr. Wendell W. Wood — Vice Chairman
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ATTRITION IN THE STATE OF NEBRASKA

Recommendations for a Statewide Study of
Student Attrition among
Nebraska Postsecondary Educational Institutions:
Issues, Goals, Pesearch Design, Timetable and Cost Estimate

January 1, 1978

The Nebraska Coordinating Commission for Postsecondary Education
P. O. Box 95005 Lincoln, Nebraska 68509

PREFACE

The attrition study proposed in this report is complex and will demand substantial state-level and institutional resources to carryout. The complexity of the study is compounded by the lack of state-wide operational definitions for attrition: persisters vs. leavers, voluntary leavers vs. involuntary leavers, dropouts vs. stopouts, etc. The transfer student provides additional confusion in that a student may be one school's dropout, but another school's transfer. Definitions associated with the transfer student also are contributing to the confusing milieu. There are the "reverse transfers" (or dropout), "returning transfers" (or stopout), "double reverse transfers," "open-door transfers," and the "intercollege-interuniversity transfers." One result of this study should be to define these categories for Nebraska institutions and the Legislature. Another result should determine the number of students involved in each form of attrition and transfer.

The subject of attrition has not been ignored by the postsecondary institutions in Nebraska. Schools have made efforts to determine the extent of, and reasons for, attrition. These efforts have largely been independent of each other (with the exception of the L.B. 1054 reports) and the institutional findings have not been consolidated nor summarized for statewide evaluation of the attrition situation in Nebraska. Attached to this report (Appendix 1) are

summaries of the studies schools have done, or are doing, that are related to attrition.

The Nebraska Education Television Council for Higher Education (NETCHE) plans to have as one of its top priorities for the 1978-79 Title III (Higher Education Act of 1965, as amended, Strengthening Developing Institutions Sector) program the funding of programs directed toward student retention. The twelve participating institutions* feel they have sufficiently researched attrition on their campuses to begin seeking federal funds to finance student retention related programs.

*State Colleges: Chadron, Kearney, Peru, Wayne; Technical Community Colleges: Northeast Technical Community College Area; Independent Collegiate Institutions: College of St. Mary, Dana College, Hastings College, Midland Lutheran College, Nebraska Wesleyan University, Union College, and York College.

ATTRITION IN THE STATE OF NEBRASKA

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*Not included with this report. Available at Commission Office.

Section

VI. Appendices (con't)

4. "A Review of Recent Research of Student Attrition" by Patrick T. Terenzini, Associate Professor, Department of Higher/Postsecondary Education, Syracuse University, as Commissioned by the New Hampshire College and University Council, Manchester, New Hampshire, 1976.

5. Minnesota State College System "Student Dropout Study" and Study Questionnaires, by William P. Fenstemacher, Coordinator of Curriculum Research, Minnesota State College System, 1972.

6. Sample Data Collection Forms to Assess the Magnitude of Attrition in Nebraska

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   c. Transfer Data for Students enrolled in two-year programs at Institutions of Postsecondary Education in the State of Nebraska

7. VITA of Commission Consultants

   Dr. Ernest T. Pascarella, University of Illinois Chicago Circle
   Dr. Patrick T. Terenzini, Syracuse University

I. INTRODUCTION

The Nebraska Coordinating Commission for Postsecondary Education was charged by the Nebraska Legislature to address the problem of student attrition at the postsecondary education level (Section 15(b) of Legislative Bill 459, 1977). Section 15(b) states that the Commission shall develop studies to:

> *Determine the extent of student attrition in the three post-secondary systems and recommend approaches for the reduction of attrition rates.*

The scope of this report is limited, therefore, to the three public postsecondary educational systems, i.e. the University of Nebraska, the Nebraska State Colleges, and the Nebraska Technical/Community Colleges. Attrition is, however, a universal problem among all institutions of postsecondary education. The proposed attrition study (Section IV) has the potential for a broader scope that could include both public and independent sectors of postsecondary education in a comprehensive examination of student attrition.

The directive provided by Section 15(b) of Legislative Bill 459 (Appendix 2) required that a study be done by the Commission to determine the extent of student attrition. This directive was clarified by Senator Frank Lewis and Senator Jerome Warner in a letter to the Commission's Executive Director on September 6, 1977 (Appendix 3). In

that letter Senators Lewis and Warner requested that the Commission provide in a report to the Nebraska Postsecondary Education Advisory Committee, by January 1, 1978, the following:

(1) *A description of issues related to student attrition and an assessment of their implications;*

(2) *A review of statewide goals that could be adopted to reduce attrition;*

(3) *A research design that describes how an indepth attrition study should be conducted; and,*

(4) *A timetable and cost estimate for completing a comprehensive study of student attrition.*

This report is the Commission's response to this request of the Nebraska Postsecondary Education Advisory Committee.

A. Report Summary

Issues (Section II)

This section of the report describes the implications of attrition for institutions, state planners, and legislators and some common issues which relate to student attrition. The various approaches used by researchers to determine why students leave institutions of postsecondary education are summarized.

Attrition is a multi-dimensional problem involving a variety of contributing factors. The cause and effect relationships of attrition continue to elude the efforts of

the most talented researchers. Studies have shown that: (1) attrition has always been and will continue to be a problem for institutions of postsecondary education, (2) a variety of factors contribute to attrition, (3) attrition has an impact on programming, planning, and budgeting at the institutional, system and state levels, and (4) most efforts to meaningfully address the question of attrition are insufficient due to the lack of a longitudinal design for the conduct of the research related to attrition.

Attrition has been the subject of much research and a comprehensive report of the issues and research findings associated with attrition has been provided (Appendix 4).

Goals (Section III)

One major goal, with respect to attrition, is to reduce the rate of attrition experienced by institutions of postsecondary education. As more forecasts of declining enrollments are made, institutions will need to make a greater effort to retain those students who do enroll. Even though many students withdraw because they have achieved their educational objectives before they complete an academic program (and it may be a disservice to them to keep them enrolled by various forms of coercion), other students decide to leave before their objectives are met. It is, therefore, important to address the questions of who, why, when, where, how

many, and for what reason students leave postsecondary education at the institutional and state level.

There are a number of objectives that institutions, state planning agencies, and legislators might work toward in an effort to reduce the rate of attrition. These objectives, also stated as recommendations for action, are provided in this section of the report. In summary they are to (1) develop strategies for informing students of the various educational opportunities that are available to them, and the differences which exist between and among these opportunities, (2) conduct a longitudinal study to address the questions of who and why students voluntarily and involuntarily leave school, (3) include with the longitudinal study another study to assess when, where and how many students withdraw from school, and (4) make recommendations for implementing programs and services suggested by the findings of these two studies.

It should be made clear at this juncture that there may be a substantial cost to the institutions and to the state when implementing programs directed toward the reduction of attrition; and the benefits may not outweigh the cost of these programs. It should be recognized that there is no guarantee that these programs will appreciably reduce current attrition rates.

The fifth objective is to assess whether the attrition rate has been reduced after efforts are made to implement programs which are directed toward the reduction of attrition.

Research Design (Section IV)

The proposed research design is for a longitudinal study of attrition. Among the various designs used to study attrition, the longitudinal study has the most potential for producing findings that would be useful at both the institutional and state level. When compared with the "Autopsy" and cross-sectional designs, it is more methodologically pure. The Minnesota study conducted in 1971, and included with this report (Appendix 5) is an example of a statewide study of attrition utilizing the autopsy design.

This proposed design is only one approach on how to conduct an in-depth attrition study. This does not mean that the design is the only method for conducting a longitudinal study nor is this design complete in every detail. It does, however, provide a general description and overview of how a comprehensive study of attrition should be conducted.

The study proposed is modular in that certain parts or variables suggested could be elaborated upon or deleted, depending upon the level of interest for including certain variables and the resources made available to conduct the

study, e.g. personal interviews, of a random sample of dropouts might be conducted or certain variables, such a the personality variables, might be deleted.

Timetable and Cost Estimates (Section V)

The time table presented is a two-year study beginning in the summer of 1978 and continuing through to the fall semester of 1980. It is possible to conclude the study at the end of the first year (Fall 1979), but the second year of data collection will provide for verification of the first year's data and show whether significant differences, in the reasons why students withdraw from college, exist between freshmen and sophomores.

This study will be more expensive to conduct than other types of attrition studies. First, it is a description of how an in-depth attrition study should be conducted; not could be conducted. Second, it's a longitudinal rather than an autopsy or cross-sectional design. The estimated cost of this study is $121,000 for the three-years necessary to conduct the study. This estimate is based on certain assumptions regarding participation and response rates, data collection techniques, availability of pre-college data, etc.

B. Acknowledgements

The Commission is deeply in-debted to the Advisory Committee to the Commission for their thoughtful comments and reactions to drafts of this report. The Commission also would like to thank Dr. Ernest T. Pascarella and Dr. Patrick T. Terenzini for the work they did for the Commission in preparing the majority of this report. A special word of appreciation is to be extended to the New Hampshire College and University Council and the Minnesota State College System for allowing the Commission to append their studies to this report.

II. ATTRITION: Implications, Related Issues and Findings, and Basic Designs for Studying Attrition

IMPLICATIONS

Despite the popular belief that a student who begins a college education will complete it four years later, considerable research suggests that the receipt of a baccalaureate degree after four years is by no means the typical experience of a student going to college in the United States. Although the estimates vary somewhat, national studies indicate that only about half of the students who begin a college career complete their programs in four years. There is also some reason to believe that perhaps as many as 40 percent of the high school students going on to college never complete a baccalaureate degree program. (The so-called "dropout rates" are even higher among community college, associate degree, students.) Moreover, these nation-wide four-year rates appear to have held relatively constant over the last fifty or sixty years.

Such figures clearly have important policy and planning implications for individual institutions, state legislatures, and the nation as a whole. At the national or state level, attrition (when it involves a complete dropping out of the educational system, not merely a transfer from one institution to another) may represent a loss of talent through the less than full development of human resources. Some have argued

that an extension of postsecondary educational opportunity that does not also include the provision of the assistance needed to complete that education is no opportunity at all.

Federal, state, institutional, and individual resources are invested in college attendance, and the time and energies of admissions officers, faculty members, financial aid officers, counselors, residence hall staff, and other personnel are expended on those students who ultimately do not complete as well as on those who do complete their degree. To the extent that some students who drop out would like to remain in school, and to the degree that the reasons for discontinuance are within the relm of federal, state or institutional influence, then such investments may represent misexpended resources.

Declining enrollments and the projected contractions in the number of persons likely to go to college in the 1980's are a source of concern among administrators, planners, and legislators. Private institutions derive a major portion of their operating revenues directly from student tuition and fees, and state appropriations to public institutions are typically based on projected enrollments.

For individual students and their families, dropping out may represent both a loss of financial resources and a personal or vocational setback. The personal and emotional costs of dropping out may never be reasonably estimated.

It can, of course, be argued that dropping out of college may result in positive developmental benefits for some students, but the fact remains that both state and national policy decisions have been made to extend opportunities for postsecondary education to all who wish it and can meet certain, minimal entry requirements.

In the last analysis, it would seem that the need to reduce current attrition rates might be argued from either (or perhaps both) of two perspectives. From the point of view of public policy or professional obligation, the issue focuses on what actions might be taken to improve the chances of "survival" of those individuals who wish to complete a college degree program but at present find it difficult or impossible to do so. Viewed from the vantage point of institutional administrators and planners, the issue is related to the need to maintain stable enrollment levels, recognition that we may be nearing the ceiling of our ability to accomplish that goal by replacing those who drop out with other students, and a focusing on the reduction of attrition as a possible solution: If we cannot continue to bring in more and more "replacements," then what might we do to retain those who do enroll?

RELATED ISSUES AND RESEARCH FINDINGS

While much research on the sources of attrition has been done, the definitions, research designs and methods,

and even the results of these studies often vary considerably. A review of existing research does point, however, to certain student and institutional characteristics-- and particularly to the interactions (or "fit") between student and institution-- which appear to be more or less consistently related to attrition and which may be amenable to administrative action in both policy and program areas. The variables identified here as being related to attrition, however, may or may not be important influences on any given campus. Thus, they should be viewed as potentially important areas for consideration in seeking to reduce institutional or system-wide attrition. They can in no sense be considered to obviate the need for "local" research.

Student Characteristics

Numerous studies suggest that the best pre-college predictor of college persistence is academic performance in high school: the student who has met the competition in the past is the most likely to do so in the future. Some relation between academic aptitude (e.g., SAT or ACT scores) and persistence is also identifiable, but it is not nearly so strong as that between achievement and persistence. Parents' socio-economic status is also positively related to college completion, but level of parents' education may be more important than their income level.

An applicant's commitment to completing a college degree, or to a career objective--as well as the importance to parents of the applicant's completion--are also positively related to college persistence.

Sex and personality traits are less clearly associated with completion of a baccalaureate degree program. Women tend more often than men to complete college in four years, but after five or more years the completion rates appear to even out. Women do, however, appear to leave for different reasons than do men. No consistent profile of the personality characteristics of dropouts emerges from the available research.

College Characteristics

Many studies indicate that attrition is heaviest at the end of the freshman year, suggesting that administrative efforts to reduce present dropout rates should be focused on the initial year of college. Dropping out also appears to be more common at public than private institutions and at two-year as opposed to four-year schools. The evidence relating institutional size to attrition is inconclusive. Small colleges (enrollments of 500 or fewer) appear to have somewhat higher attrition rates (nationally) than larger institutions. Size generally does not appear to be an important consideration for campuses with enrollments of more than 500.

The flexibility of programs and policies to accommodate the needs and interests of students, and the institutional interest in students manifested through both academic and social programs and policies appear to be more important features of the institutional influence on attrition than size or type of school. Students living on campus are less likely to drop out than commuting students, and financial assistance in the form of scholarships or work-study grants (but not loans) is also positively associated with student retention. The presence of faculty members who are interested in, and accessible to, students is also positively related to college persistence.

Student-Institution Interactions

The more recent literature suggests that attrition may be most closely related to the interaction (of "fit") between the student and the institution he or she attends. What happens to a student after arrival on campus appears to be more important in subsequent attrition decisions than are the characteristics he or she brings to college.

Faculty members and other students appear to be important mediators in facilitating (or inhibiting) the assimilation of new students into the institutional "community." The student who shares the values and interests of faculty members and other students is a less likely candidate to drop out than is the student who fails to receive what to

him or her are sufficient personal, emotional, or intellectual rewards from rewards from the academic and social systems of the institution.

Institutional policies and programs may be influential in this area--in either fostering or hindering the development and experience of a sense of community and belonging among students. Grading practices, the social and academic environment of the residence halls, faculty reward systems and the behaviors they foster, program and curricular variety and requirements, and bureaucratic procedures can promote or inhibit the intergration of students into the social and academic systems of an institution.

Limitations on the Research

Despite the large number of studies of attrition which have been done, efforts to synthesize the results are difficult, and administrative actions based on such a synthesis would be risky. The source of this risk lies principally in the lack of comparability among studies. Most of them have been done at single institutions and, consequently, considerable variation exists with respect to definitions, designs, sample procedures and representativeness, types of data collected, statistical procedures, and controls for confounding variables.

Moreover, without exception, the available studies of attrition are correlational and, consequently, no causal connection between or among variables can be made.

(The study proposed in Section IV will be no exception. The statement that a certain variable is related to attrition is a statement about the liklihood that an identified relation is due to chance; it is not a statement of cause and effect. Making causal linkages in the attrition process is, at present, beyond the powers of social science research.)

BASIC DESIGNS FOR STUDYING ATTRITION

Whether they are national, system-wide, or single institution studies, most of the research on attrition adopts one of three basic designs. Design modifications necessitatied by the level at which a study is done (e.g., single institution v. a state-wide system) are more adjustments of number and planning than of conception. What follows is a summary description of these basic designs and the comparative strenghts and weaknesses of each.

The "Autopsy" Study

The first and most logically appealing of the three designs involves an after-the-fact survey of the reasons dropouts give for the discontinuation of their studies. As part of this design, one first identifies who the dropouts are (either in a single class or college-wide) and then sends them a questionnaire which respondents use to describe why it was they left school. The design seems straightforward enough: if you want to know why students drop out, ask them.

The advantages of this design lie in getting students' reasons for dropping out pretty much in their own words (e.g., lack of money, dissatisfaction with the academic program, medical reasons, personal reasons). Such a design also affords an opportunity to learn from these students what might have been done that would have induced them to stay, what they are doing now, what their future plans are, and whether they plan to return to the same school. Compared to certain other designs, this one is also relatively inexpensive and simple to conduct.

Despite the common sense appeal of this design, its drawbacks probably far outweigh its strengths, making it the weakest of the three designs discussed here. First, despite going "straight to the horse's mouth," there is some reason to doubt that the horses are giving a straight answer. Students who have left an institution may feel some need to rationalize their decision--to make it socially (even personally) acceptable. Second, the design forces retrospective responses; these recollections, even if not consciously altered, may not be entirely accurate reflections. Third, response rates to mailed questionnaires in this design are notoriously low; a response rate of 40 to 50 percent would be considered excellent. A low response rate is likely to yield data from respondents who are unrepresentative of dropouts as a whole and generalizability is, thus, seriously jeopardized.

Finally, comparisons between leavers and stayers with respect to attitudes toward the institution or evaluations of services and programs are very difficult to make. The data are likely to be gathered at different times and under different conditions. Moreover, possible pre-matriculation differences between stayers and leavers must be controlled (if they are controlled at all) on the basis of information collected from students at the time of admission. Typically, such information is meager and inadequate for research purposes.

The Cross-Sectional Design

A second common design involves sampling a single class or the total institutional enrollment late in a spring semester and collecting information on students' social and educational attitudes and behaviors while they are still enrolled. One then waits until the start of the next academic year to identify those sample members who fall into various categories of "leavers" (e.g. voluntary withdrawals and academic dismissals) and those who are "stayers". The groups are then compared on the variables for which information has been collected.

This design is stronger than the autopsy study in several respects. First, comparable data are collected from both leavers and stayers, and at a time when their attitudes

and experiences are relatively fresh in their minds. In the case of leavers, there is little or no need to rationalize or justify a decision to leave since it has not yet been made (or at least carried through). Second, response rates from enrolled students are typically much higher than they are for students who have left an institution. Consequently, sample representativeness and the generalizability of results are enhanced.

A major liability of this design, as with the autopsy study, is the inability to take into account or control (beyond available admissions information) any pre-matriculation differences between leavers and stayers. That is, some students may be more disposed to dropping out than others even before they register for the first time. If such differences exist, this design is unable to detect them. This inability makes it exceedingly difficult to assess reliably the role in attrition of institutional characteristics, programs, policies, or student experiences after enrolling. Investigation of the institutional "contributions" to attrition requires more information on what students are like when they come to college than is usually available without another, earlier data collection.

A second drawback of this design is its inability to shed any light on where dropouts go or what they do after withdrawal. There is no way to know whether they are still

enrolled elsewhere (in- or out-of-state), or whether they intend to return eventually to the school they have left (or to another in-state institution). Only the autopsy study carries the capability to answer these questions.

The Longitudinal Design

A third fundamental design, and perhaps the strongest of all, is a longitudinal study which begins with a data collection prior to students' initial enrollment in a college or university. Extensive information on entering students' social and educational backgrounds, expectations of college, and educational and career goals, etc., is collected. Another data collection (from respondents to the initial questionnaire) is made subsequently, usually near the end of each successive academic year. The study may be terminated at the end of the first year, or continued through two or more years. Dropouts are identified at the start of the academic year following the second (or third, or fourth) data collection (dropouts are those students who are expected to register for that year but do not), and comparisons of leavers and stayers are then made.

The greatest advantage of this design is the ability to control student characteristics in assessing the role of institutional programs, policies, or traits in the attrition process. Such things as academic aptitude and high school

achievement, and goal commitments, etc., can be taken into account and statistically held constant (they are things the institution can do little about anyway) before one begins to look at attitudes toward the institution, academic performance, or frequency of contact with faculty as possible sources of attrition--the things over which a college may be able to exert some influence.

While it is probably impossible to design a study which will permit the identification of cause-and-effect relations between certain variables and attrition, the longitudinal design, because of the opportunities it affords to control for at least some of the confounding variables, brings us about as close as we may ever come to making such connections. Findings will still be correlational, not causal, but with a longitudinal study (as opposed to a cross-sectional one) we can have greater confidence in the validity of study results.

By comparison with the others, this design is as methodologically "pure" as one might hope to find. As noted earlier, however, every design exacts a price of one sort or another. First, longitudinal studies--almost by definition--take longer to do. The data collection for such a study might begin in July, with the first follow-up occurring the following March or April. But analysis must wait on the identification of respondents as leavers or stayers, something which cannot be done until the start of the next academic

year. (In most instances, it is difficult, if not impossible, to identify leavers during an academic year and, in any event, the research indicates that attrition is highest between academic years, not within them.) Thus, it may be fifteen months or more before results from a longitudinal study are available.

Second, longitudinal studies are more expensive then either of the other basic designs. There are more data collections and one must deal with larger samples in order to allow for nonresponse rates in two (or more) data collections, rather than in just one.

Third, from an administrative point of view, longitudinal studies take more planning and organization. Data management problems are more complex and time consuming. In brief, a longitudinal design is not one that can be done successfully on a part-time basis or by inexperienced personnel. This design involves a major research commitment and requires (by comparison with the other designs) longer-term administrative and financial support.

Finally, as noted earlier, only the autopsy study design will yield information on the current activities or future plans of dropouts.

(It is worth noting, at this point, that the costs associated with adoption of a longitudinal design in Nebraska may be substantially lower than they would be in another state. The reason is the apparent availability of extensive pre-matriculation information on Nebraska students entering the University and state colleges. To the extent that this information is suited to the task, the pre-college data

collection may not be necessary. It may still be required however, if the appropriate controls are to be possible in analyses of data collected on technical and community college students.)

III. Statewide Goals and Objectives

The established goal is to make every effort at the institutional and state level to reduce the rate of attrition at institutions of postsecondary education. As indicated in the preceding section, there are a number of interrelated factors which are associated with attrition. This does not mean that nothing can be done to minimize attrition. Steps can be taken at all levels to work toward this goal of attrition reduction. To meet this goal, certain objectives must be accomplished.

Objectives

A. The first objective is to help students enroll in the postsecondary institution most appropriate for them.

One of the issues, or factors, associated with attrition is the "goodness of fit" between what the student wants and has to offer and what the institution can provide and has to offer. Where these are in conflict, the potential for attrition is high. To help students find the best school for them is no easy task. It requires that students have the best information available on the institutions environment, program offerings, policies and practices. Another requirement is that students are aware of the variety of educational opportunities that are available to them and the differences and similarities which exist between and among those opportunities.

A number of strategies will be necessary to accomplish this objective: Some of these strategies include:

(1) The preparation of a bulletin, to be given every high school senior (or interested individual) that generally describes all the postsecondary institutions in Nebraska. Although efforts have been made to do this (including the one prepared on admissions and financial aids by the Nebraska Association of Student Financial Aid Administrators and the Nebraska Department of Education in 1977-1978) too few dollars were available to do the kind of job which is necessary for such an undertaking.

A Task Force representing each of the public postsecondary systems, as well as the independent collegiate and private vocational sectors, the Department of Education, high school and college students, and counselors, and Commission staff should be formed to produce such a document. The document should provide minimal institutional characteristics and emphasize programs and degree offerings with sections devoted to cross-indexing programs by level of offering back to institutions. The ideal would be a general handbook that prospective students would use initially and would provide directions for them to seek additional, more detailed information on the schools and/or programs which interest them.

Since this is a statewide effort, the legislature should make the funds available to an agency for purposes of producing and distributing the document.

(2) Statewide seminars should be conducted for high school counselors by the institutions so that they know the schools and program offerings well enough to help students select the most appropriate institution, and level of institution, for them.

The institutions and systems have vested interests in these seminars or workshops and should be encouraged to coordinate their efforts and pool their resources in sponsoring them.

(3) Federal and state funds need to be acquired to establish Education Information Centers (EIC's) where prospective students can obtain additional information, counseling and guidance in developing their educational plans. Once established, the existence of these Centers need to be made known to all Nebraskans so that they can make use of the services provided by such Centers.

Money is being made available by the Federal Government through Title I, Part D of the Education Amendments of 1976, for the establishment of these centers, but state support is also required. The Education Information Centers can do much to help prospective students locate educational opportunities that best suit their needs.

(4) A long range objective is to address the relationship between entrance and admissions standards and attrition. It may be necessary for institutions to use more rigorous admissions criteria to prevent occurances of the "revolving door" that has been associated with policies of open admissions. Students need to know what will be expected of them while enrolled and whether or not they are sufficiently prepared to succeed.

A subject as sensitive as this can best be addressed by the institutions and systems offices with encouragement to do so by the legislature.

This is not an exhaustive list of the strategies that might be followed in helping prespective students locate educational opportunities and deciding whether there are better opportunities for them than others. Implementing these strategies will, however, provide a good start toward meeting the objective of helping students locate that institution which can best meet their need and is compatible with level of preparation.

B. The second objective is to conduct a longitudinal study of attrition to assess who the students are that withdraw and why they withdraw.

Although other approaches have potential for answering these questions, only the longitudinal research design conducted on a statewide basis is the most methodologically pure. The results of such a study should suggest activities and programs that might be instituted at the institutional and state level to minimize attrition. Without such a study the attempts to reduce attrition may be ineffective as they may be based on inconclusive evidence.

The study suggested in Section IV of this report will provide substantive evidence of who and why students withdraw. It will also provide a substantial amount of information about students enrolled in Nebraska institutions that will be useful to institutions and state legislators beyond the information needed to address questions related to attrition.

Such a study should be funded by the legislature and begun in the summer of 1978. If this study is not started at this time it will be necessary to wait until the summer of 1979 to begin data collection.

C. The third objective is to determine what the attrition rate is among the postsecondary institutions in Nebraska

Evidence seems to suggest that Nebraska has an abnormally high rate of attrition. It is difficult to

substantiate this claim as no hard evidence is available which shows when, where, and how many students actually leave school. For this reason a study needs to be done to determine what the attrition rate is and whether this rate really is abnormally high. It is difficult to address any problem unless it is known that there is a problem. The sample data collection forms included with this report (Appendix 6) could be used, in conjunction with the data collection efforts associated with the longitudinal study, to determine how severe a problem we have here in Nebraska. This information may show that Nebraska is no worse off than other states, or it may show just the reverse.

These data should be collected in the Fall of 1978 and reported during the Spring of 1979.

D. The fourth objective is to use the findings of the attrition studies to develop or enhance programs that may be helpful in reducing the rate of attrition

It is difficult at this juncture to anticipate the kinds of programs that could be initiated for the purpose of reducing attrition. The literature suggests that improved counseling programs may be required. The nature of the counseling (i.e. academic, personal, financial, career) is open to conjecture without a study such as the one proposed in the following section of this report (Section IV). Other programs might be initiated to increase the amount of informal

interaction between students and faculty. Better information about financial aid and more financial assistance may be suggested. Academic policies and procedures may need to be examined by the faculty and academic administrators and perhaps modified where it can be shown that these policies and procedures are contributing factors of attrition.

There is no single answer for attrition nor is there one specific program that can be developed for purposes of reducing attrition. A number of inter-related programs and coordinated efforts will be required if attrition is to be reduced. Questions that only an in-depth attrition study can begin to address are: what kind of programs? what kind of coordinated efforts? Where should administrators be allocating more money for attrition reduction related programming? It can generally be concluded that more money will have to be spent on retaining students in the future. When, where, and how this money can best be spent is only conjecture until the findings of an attrition study are analyzed and appropriately interpreted.

E. <u>The fifth objective is to repeat the study on attrition rates to determine whether the programs developed have had any impact on reducing the rate of attrition.</u>

This is a repeat of the objective described in C above. It may be that a new set of circumstances are impacting on attrition by the time this follow-up study is conducted,

but, the entire process will be fruitless unless this study is done. Even through the findings may suggest that the attrition rate has been reduced, it will be difficult to directly attribute the reduced attrition rate to the implementation of the programs. The results of this study may show an increased rate of attrition; hopefully that will not be the case.

The question should be asked, will the accomplishment of these five objectives help Nebraska meet its goal of reducing attrition? There is no answer to this question. An unqualified "yes" would be as wrong, as would be an unqualified "no". These objectives, if met, will only assist the institutional administrators, agency representatives, and legislators learn more about the attrition situation in Nebraska and deal more effectively and directly with the factors related to students decisions to withdraw from post-secondary education.

IV. A Research Design for an Attrition Study

In reviewing the extensive body of research evidence on the student dropout from higher education, both Spady (1970) and Tinto (1975) have argued convincingly that college and university attrition is a process which develops over an extended period of time rather than a decision made at a particular point in time. The actual decision to drop out is only the culmination (and most visible product) of a complex and dynamic network of attitudes and experiences. Thus, serious attempts to understand and, subsequently, deal correctively with the possible causes of attrition must be longitudinal in nature. Conducting a one-time survey of students' attitudes toward college or their reasons for staying or leaving may fail to capture, therefore, the full complexity of why students actually persist or dropout at a particular institution.

A longitudinal study of attrition in Nebraska colleges and universities enrolling freshmen students is, therefore being proposed. The study would conduct over a two-year period a series of surveys of the same group of students at different times during these students' first two years of college and would include the following:

1) an assessment of the academic aptitudes, personality characteristics, levels of secondary school achievement,

expectations of college and other background characteristics which students bring to college;

2) an assessment of students' actual experience of college, e.g., achievement, peer and faculty relationships, satisfaction with college, work and leisure activities, sources of influence and satisfaction, extracurricular involvement;

3) an evaluation, from the students' perspectives, of various institutional programs, policies, and support services (e.g., academic, personal and career counseling services; quality of instruction; degree and program requirements, or residence hall life).

4) a follow-up survey of students who drop-out of a particular college (either for academic reasons or voluntarily) to discern their retrospective reasons for leaving and to trace their future educational experience -- do they drop out permanently, leave to attend another institution or "stopout" of higher education temporarily and then return at a future time.

A study of this type would, for all practical purposes, combine two of the three most common approaches to the study of attrition, autopsy studies and predictive longitudinal studies, into a single, comprehensive investigation. Not only would information be gathered concerning retrospective

reasons why students leave higher education (autopsy approach), but an effort would also be made to find out what variations in the actual experience of college have utility as predictors of subsequent college attrition (predictive longitudinal approach). An advantage of combining the two approaches is that one source of data provides some cross check on the validity of the findings yielded by the other, and each collects certain information not available under the other approach.

A second advantage of the proposed design is that it would permit statistical control of the aptitudes, prior achievements, personality characteristics, expectations of college and other measured background characteristics which the student brings to college. This would help determine whether differences in the actual experience of college are associated with persistence/attrition after the influence of student entering characteristics has been held constant. As an example, assume that certain of the characteristics which students bring to college (e.g., academic aptitude, prior achievement, personality characteristics) reliably differentiate students who persist at a particular institution, those who drop out because of poor academic performance and those who leave voluntarily in good academic standing. Levels of academic aptitude, prior achievement and the personality characteristics of entering freshman students are variables over which a particular institution probably has little or no control. On the other hand, institutional

decision-makers may have control over policies and programs (i.g., academic advising, residence arrangements) which influence students' actual experience of college. It would be important then to determine if any factors in students' actual experience of college make a useful contribution to the prediction of college persistence/ attrition above and beyond the predictive contribution of students' entering characteristics. The design employed by this proposed study would permit such an analysis.

Design and Sample

The design of the proposed study would be longitudinal with data collections being conducted prior to students enrolling in college, during their freshman and sophomore years and subsequent to each year. Additionally, students dropping out at various times during each school year would be part of the analysis and contacted for follow-up data. Rather than sampling selectively from the population of students encering Nebraska public institutions, it is proposed that all first-time entering students (the entire population) in a particular year be surveyed initially. This is important since a major problem in any longitudinal study is the loss of subjects who may fail to respond to second or third follow-up data collections. Thus it is important to initiate the study with the maximum of respondents possible, particularly if the results of the study are to be useful to

individual institutions. The total initial survey would involve between 9,000-10,000 entering students.

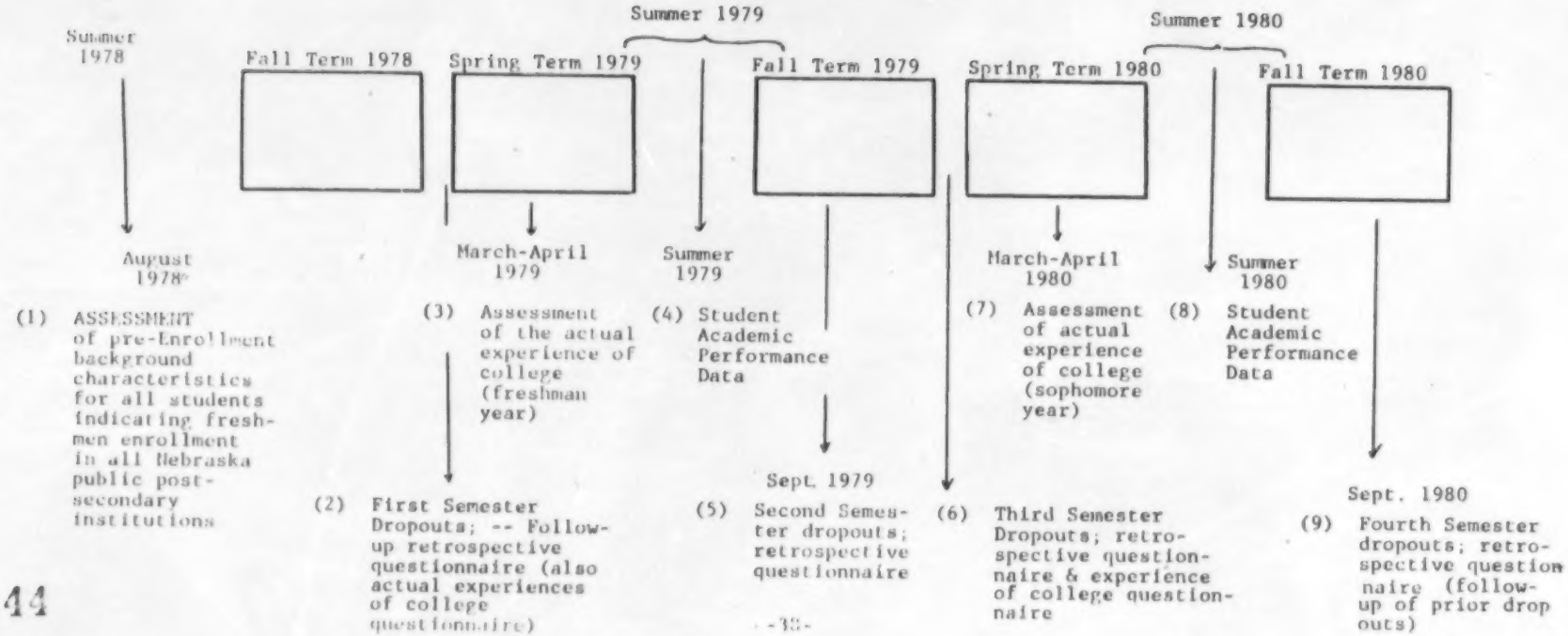
Figure 1 below presents a graphic representation of the study extended to two years. For illustrative purposes only, the study has been given a start-up time in August, 1978. (Preparations for the study, would have to begin about two months earlier.) As the figure indicates, the data collection would be made prior to the beginning of the Fall term of 1978. At that time information on student pre-enrollment and background characteristics would be gathered. The second proposed data collection would occur between the first two semesters of college. At this time first semester dropouts would be surveyed to determine in a retrospective manner their reasons for dropping out. They would also be asked to complete an instrument assessing their actual experience of college. The third data collection, occurring sometime toward the end of Spring, 1979 term, would survey all persisting students as to their actual experience of college during the freshman year. Academic performance data for these persisting students would be gathered during the Summer of 1979 and early in Fall term of 1979 students who dropped out over the summer would be identified and sent the retrospective questionnaire.

The study could stop at this point and constitute a study of freshman year attrition. This, in fact, might be desirable because of budgetary or time constraints. It is

Figure 1

PROSPECTIVE LONGITUDINAL ATTRITION

STUDY DESIGN


Summer 1978
Fall Term 1978
Spring Term 1979
Summer 1979
Fall Term 1979
Spring Term 1980
Summer 1980
Fall Term 1980
August 1978
(1) ASSESSMENT of pre-Enrollment background characteristics for all students indicating freshmen enrollment in all Nebraska public post-secondary institutions
March-April 1979
(3) Assessment of the actual experience of college (freshman year)
(2) First Semester Dropouts; -- Follow-up retrospective questionnaire (also actual experiences of college questionnaire)
Summer 1979
(4) Student Academic Performance Data
Sept. 1979
(5) Second Semester dropouts; retrospective questionnaire
March-April 1980
(7) Assessment of actual experience of college (sophomore year)
(6) Third Semester Dropouts; retrospective questionnaire & experience of college questionnaire
Summer 1980
(8) Student Academic Performance Data
Sept. 1980
(9) Fourth Semester dropouts; retrospective questionnaire (follow-up of prior drop outs)

proposed, however, that the study be extended through the second year as there may be significant differences between freshman and sophomore years in the reasons why students college. Continuation of the study at this point would require only that the same set of respective follow-up surveys be sent to the students who persist or drop out during the second year. The exception to this would occur in the final survey of dropouts in September, 1980. At this time a brief questionnaire would also be mailed to all previous students identified as dropouts to determine if they had or had not re-entered postsecondary education, and if so where and in what form. It is also suggested that a similar follow-up be conducted in the Fall of 1981 to capture the possible re-entry of the 1980 dropouts.

Instrument and Variables

It is not the purpose of this proposal to develop a specific instrument to be used by all institutions participating in the study. Rather, individual institutional characteristics and circumstance may require that instruments be somewhat tailored for each particular student body. What the proposal suggests, however, is a general set of variables which, based on the available literature, probably should be assessed. This listing is meant to be suggestive rather than prescriptive or exhaustive.

Pre-enrollment Characteristics:

Sex
Academic Aptitude
Secondary School Achievement
Secondary School Size
Secondary School Activities
Career/Educational Aspirations
Personal Goals and Objectives During College
Prior Work Experience
Financial Resources and Financial Aid Received
Family (non-financial) Support for College
Was a Particular Institution the Student's First, Second, Third Choice, etc.
Expectations of the Academic and Non-Academic Experience of College
College of Enrollment and Expected Major
Racial/Ethnic Identification
The Extent of a Student's Friends and Acquaintances Already at the Institution or Expecting to Enroll Concurrently
Personality Orientations

With the exception of Personality Orientations nearly all of the important pre-enrollment characteristics mentioned are surveyed by the ACT (American College Testing Program) Student Profile Section. Many institutions in Nebraska already use this instrument and its use is suggested for all institutions participating in the study as a way to standardize responses and permit later comparisons among institutions if desired.

The ACT instruments do not provide the personality trait information. Since a substantial number of studies indicate associations between personality characteristics and persistence/attrition during college, the personality characteristics information might be a useful supplement to the ACT data. Certain subscales from the Omnibus Personality Inventory (OPI) for the collection of these data are suggested.

Retrospective Reasons for Dropping Out:

This instrument would be sent to all dropouts in an attempt to gather, in a retrospective manner, their reasons for leaving. The instrument would assess the following areas:

- Financial Resources/Need and Aid
- Present Employment Status
- Possibility of Re-entry into Postsecondary Education
- Transfer status, if appropriate
- Major Reasons for Dropping Out
- General Experience of College (e.g., satisfaction with with classes, peer relationships, academic advising, academic program, availability of faculty, provision for extra curricular activities, perceptions of degree of development in college)

A number of possibilities exist for adapting instruments already in use such as an instrument prepared by WICHE/NCHEMS and one presently in use in the Minnesota State Colleges.

Students' Actual Experience of College:

The purpose of this instrument would be to assess the degree to which students are integrated into the academic and non-academic systems of the particular institution they are attending. It would include, but not be limited to, assessment of the following general variables:

- Frequency, Nature and Quality of Informal Contact with Faculty
- Effectiveness of Academic Advising and Personal and Career Counseling/Information Systems
- Attitudes Toward the Academic Program and Extra Curricular Life
- Frequency of Participation in Extracurricular Activities
- Satisfaction with Friendship Groups
- Perceived Extent of Intellectual and Personal Development During College
- Perceived Sources of Satisfaction and Influence During College
- Satisfaction with Teaching in Courses

This particular instrument may require the greatest amount of tailoring for individual institutions. An instrument designed to measure most of the variables indicated above has been used in research at Syracuse University with reasonably good success. This instrument might be appropriate for adaptation by the Nebraska institutions.

Analysis of Data

Without becoming overly technical, it is proposed that the data be analyzed with appropriate multivariate methods (e.g., Multiple Regression Analysis or Multiple Group Discriminant Analysis). Packaged statistical routines which conduct many kinds of multivariate analyses are widely available and are supported by the University of Nebraska Computer Center. Routines such as the Statistical Package for the Social Sciences (SPSS) would be particularly appropriate and would provide easily understandable output, as they are well documented.

Persistence/attrition status should be broken into more than two categories to capture potential differences among different types of dropouts. Specifically dropout categories should be disaggregated into:

1) academic performance dropouts

2) voluntary immediate transfers (no interruption of studies) to other institutions in Nebraska

3) voluntary immediate transfers to other institutions outside Nebraska

4) temporary dropouts ("stopouts") who within one year return to postsecondary education in Nebraska

5) dropouts who within one year fail to return to postsecondary education in Nebraska

Persistence/attrition status would be the dependent variable and the analysis would be conducted in an ordered stepwise manner. In order to control for the influence of student pre-enrollment characteristics this set of variables would be forced into the predictive equation first. After the utility of the pre-enrollment variables in discriminating among persisters and the different dropout groups is established, variables designed to assess the actual experience of college will then be entered to determine if they contribute any appreciable increase to group separation. Data from the retrospective questionnaire will be used to cross validate the main analysis. The findings will be reported separately for each institution in the study and combined across institutions as required.

Limitations

The purpose of the proposed study is two-fold. First it is intended to assess and describe the magnitude of the attrition phenomenon in Nebraska postsecondary education and second it is designed to provide information for individual institutions upon which they can take action to potentially

reduce attrition. With regard to the second objective of the study, however, it is important to point out that any significant relationship found between students' experience of college and persistence/attrition status are not necessary evidence of cause-effect. The very nature of attrition investigations precludes such inferences. What this study can provide however are indications of areas which may be potential causes of attrition and which if addressed may help reduce the problem.

While the primary purpose of the proposed study is to identify student and institutional characteristics associated with persistence or attrition, the design will yield comprehensive information that is likely to be of value at both the institutional and state level for planning and research and evaluation purposes. Comparisons of the characteristics and responses of a wide-variety of other student sub-groups could also be made using data from this study: resident v. commuting students; male v. female students; high v. low socio-economic status; high ability v. low ability students; and small hometown v. large hometown are some examples. Moreover, the study will produce student evaluations of various institutional programs and services, quite apart from any relation between these and attrition.

V. Timetable and Cost Estimate for the Attrition Study

Timetable

There are a number of steps to the conduct of any study, especially for a study such as the one on attrition being proposed here. The following timetable shows the time frames associated with the most important and major steps of the study. It does not show the minor steps associated with interim analyses and reports, nor the exact timing of specific events associated with the study. A more specific timetable will be required at a later date and a PERT (Program Evaluation Review Technique) Chart developed to plan and monitor this schedule.

	Time Frame	Activity
1.	June and July 1978	Make preparations for the conduct of the study.
2.	August 1978	Assessment of Pre-enrollment Background Characteristics for all FirstTime Entering Freshmen (Fall 1978)
3.	December 1978 and January 1979	Retrospective Questionnaire and College Experience Assessment Collected from First Semester (Fall 1978) Dropouts.
4.	March and April 1979	Assessment of Freshman Experiences of College from Fall 1978 First-Time Entering Students

5.	Summer 1979	Collect Student Academic Performance Data.
6.	August 1979	Assessment of Pre-Enrollment Background Characteristics for all First-Time Entering Freshmen (Fall 1979).
7.	September 1979	Retrospective Questionnaire Collected from Second Semester (Spring 1979) Dropouts
8.	December 1979 and January 1980	Retrospective Questionnaire and College Experience Assessment Collected from First Semester (Fall 1979) First-Time Entering Dropouts. Retrospective Questionnaire and College Experience Assessment Collected from Third Semester (Fall 1979) Dropouts who entered in the Fall of 1978.
9.	March and April 1979	Assessment of Freshmen Experiences of College from 1979 First-Time Entering Students. Assessment of Sophomore Experiences of College from Fall 1978 First-Time Entering Students.
10.	Summer 1980	Collect Student Academic Performance Data
11.	September 1980	Retrospective Questionnaire Collected from Second Semester (Spring, 1980) Dropouts of the Fall 1979 First-Time Entering Freshman Class. Retrospective Questionnaire Collected from Fourth Semester (Spring, 1980) Dropouts of the Fall 1978 First-Time Entering Freshman Class. Follow-up on Prior Dropouts.

12.	October through December 1980	Analysis and Interpretation of Data and Report Writing
13.	January 1, 1981	Final Report Submitted to the Governor, Legislature, State Agencies and Institutions on the Findings and with Recommendations for Programs directed toward attrition reduction.

Cost Estimate

It is extremely difficult to estimate the cost of any study, let alone one which is as complicated as this attrition study. The following cost estimate was prepared on the basis of estimates and assumptions suggested by the consultants to the Commission (Drs. Pascarella and Terenzini), discussions with members of the Advisory Committee, Commission staff, and other state agency staff members who have experience with similar studies.

Item of Expenditure	Description	Estimated Cost Between June 1978 & January 1981 (31 months)
1. Postage	Based on 13¢ per mailing for each original and follow-up questionnaire and assessments taken during the course of the study	$13,000.00
2. Supplies & Material	Questionnaires, cover letters outgoing and return envelopes	6,500.00
3. Personal Services	The dedication of at least 0.70 FTE position (base annual salary $18,500) to supervise and coordinate all aspects of the study	40,825.00
4. General Operating Expenses	Expenses associated with supervisors travel, consultants travel, communications, and possibly the use of some of these monies for purposes of paying participants to respond to the questionnaires	21,000.00
5. Consultant Services	Payment for Consultants to help develop the study in more detail, questionnaire design, assist with statistical analyses to be used, interpretation of findings and report writing	20,000.00
6. Data Processing	Data Preparation and data processing Consultation, data entry, and machine time required for the statistical analyses	20,000.00
Total		$121,325.00

Note: There will be other institutional costs not reflected in this statement

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